Seismic Strengthening Of Typical Stone Masonry Wall Using GI Wire Mesh

***Abstract*—** This paper explores one of the methods of Strengthening existing low strength unreinforced stone masonry wall using GI wire meshing. Stone Masonry houses in mud mortar without any earthquake resistant features is the most common type of construction for economically weaker section. In this study, Stone masonry wall in mud mortar was modeled in SAP 2000 and analysis was done for the resultant stresses and its distribution along horizontal and vertical directions as per IS standards. we observe that the stresses occurred were beyond its permissible strength. So, GI wire meshing as a seismic strengthening measure was considered and designed, where new analysis showed improved performance. By the study, it has been inferred that GI wire mesh intervention significantly increases lateral strength and deformability of the seismically deficit low strength masonry structure. Lack of structural integrity is addressed and potential out of plane failure has been notably decreased. The basic focus of retrofitting was to enhance the integrity of the masonry building so that whole structure acts as box.

Keywords— Seismic strengthening, Stone Masonry, Mud Mortar, GI wire mesh